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COMMUNITY PRODUCTION OF ACALA COTTON IN NEW MEXICO[1]

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INTRODUCTION

Cotton has been grown in the State of New Mexico since about 1910, but the development of the industry to a point of commercial importance was not attained until 1920, when about 12,000 bales were produced. Prior to then, the production of the crop was largely confined to restricted areas in the Pecos River Valley, in the southeastern corner of the State. The principal producing districts at present lie in the valley of the Rio Grande in Dona Ana County and in the Pecos Valley in the counties of Chaves and Eddy, with several smaller districts in other parts of the State. Practically the entire crop is raised under irrigation.

In several separate districts active and successful one-variety communities have been established in which improved seed stocks have been maintained, and the production of a uniform and high quality staple has been achieved. Economic conditions in recent years have forced many growers to abandon the crop or materially reduce acreages, but with an increase in prices they may again turn to cotton. The organization of the communities in New Mexico was based on experience gained in the development of successful one-variety projects in California, and was fostered by the cooperation and help of the New Mexico College of Agriculture and Mechanic Arts and the United States Department of Agriculture. The Durango cotton was used in the first of the community projects in the Pecos Valley, but was replaced by the Acala variety, which now is used exclusively. It is a productive, early-maturing variety with fiber about 1⅛ inches long under favorable conditions of growth. The success and continuance of the community cotton production in New Mexico during the past several years has been due, at least in part, to the superior characters of this type of cotton.

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[1] For historical details relating to cotton production in New Mexico the writer is indebted to H. L. Kent, president New Mexico College of Agriculture and Mechanic Arts; R. C. Stockdale, county extension agent, Dona Ana County, N.Mex.; G. R. Quesenberry, extension agronomist, New Mexico College of Agriculture and Mechanic Arts; George M. Clark, of Las Cruces, N.Mex.; F. J. Rigney, of La Mesa, N.Mex.; Francis G. Tracy, of Carlsbad, N.Mex.; and L. E. Foster, manager of the Carlsbad irrigation project; and for access to various records to W. L. Elser, director of extension, New Mexico College of Agriculture and Mechanic Arts.

Community production of one variety of cotton is a distinct advance toward better quality of fiber than can be produced in mixed-variety districts. Since there can be no cross-pollination of varieties in the fields or mixing of seed at the public gins, stocks of pure seed may be maintained, so that all of the farmers can be supplied with good planting seed at low cost. The production of fiber of uniform quality greatly facilitates the marketing of the cotton that is raised in organized communities. Any surplus of good seed usually can be sold at some advantage over oil-mill prices, though seed selling is a feature of secondary importance that should not be overestimated. Cultural advantages also result where all the farmers in a community grow the same variety and become more familiar with its behavior and requirements as affected by local conditions.

It is not the purpose of this circular, however, to discuss at length the advantages of community production, as they have already been set forth,[2] but rather to follow the actual development of one-variety communities in an area where somewhat specialized conditions prevail and where cotton is a comparatively new crop.

ONE-VARIETY PRODUCTION IN THE MESILLA VALLEY

LOCAL CONDITIONS

Community production of Acala cotton was first undertaken in New Mexico in the Mesilla Valley, which is the largest cotton-growing area in the State. The Mesilla Valley is in the central-southern part of the State, the name applying to that portion of the valley of the Rio Grande which lies in Dona Ana County and terminates at the mountain pass just north of the city of El Paso, Tex.; the southern end of the valley being within that State. The valley contains about 123,000 acres, lying in a strip from 3 to 5 miles wide on either side of the river and bordered by low mesas. The mean elevation is approximately 3,800 feet above sea level. Farming is carried on under irrigation, the annual rainfall being insufficient for the production of field crops. Irrigation water is obtained from the Elephant Butte Dam, about 80 miles north of the valley.

The climatic conditions are usually favorable to the production of cotton. The summers being warm and sunny the plants have a uniform and uninterrupted development without being subjected to periods of excessively high temperature and humidity that occur in some of the irrigated valleys. Owing to the high altitude the growing season or period between frosts is about 200 days, so that a short-season variety is required. Good stands sometimes are difficult to obtain on account of periods of cold nights and windy weather in the spring. The rainfall during the growing season ranges from 4 to 6 inches, most of which occurs during July, August, and September.

DEVELOPMENT OF COTTON PRODUCTION

Farming under irrigation has been carried on in the Rio Grande Valley since the days of the first Spanish settlements, and probably to some extent before that time by the Indians. Water was diverted from the river by means of temporary earth and brush dams, but farming under such conditions was a somewhat hazardous undertaking, dependent upon the flow of the river, which in dry seasons might dwindle to a meager stream, or in periods of flood destroy the dams.

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[2] A list of publications on community cotton production will be found on p. 21.

Although cotton is reported to have been grown in the Rio Grande Valley since early Spanish days, its commercial development is a matter of recent years. The first interest in the crop from an economic standpoint was in 1891, when the New Mexico Agricultural Experiment Station, located at State College, near the town of Las Cruces, planted four varieties of American upland and sea-island cotton in a variety test.[3] The results of this test were considered very satisfactory, and similar work was carried on over a period of years. On account of the low prices of cotton during that period, however, little interest was manifested in the crop by farmers.

Prior to the construction of the Elephant Butte Dam by the United States Reclamation Service, the irrigated area in the Mesilla Valley comprised 15,000 to 17,000 acres, most of which was in small holdings. The principal crops were alfalfa, wheat, corn, and beans. With the completion of the dam in 1915, irrigation water was made available for a much larger acreage, one of the results of which was an influx of new settlers. Numbers of these were farmers from cotton-growing sections of Texas and other States.

As more land was brought under cultivation a serious problem developed in the valley with the gradual rise of the water table over large areas, caused by the greatly increased use of irrigation water and the impervious subsoil. Thousands of acres were rendered unfit for agricultural use and further development was brought to a standstill. In 1919 an organization of the landowners of the valley, known as the Elephant Butte Irrigation District, was incorporated under the laws of the State and entered into arrangements with the United States Reclamation Service for the construction of a comprehensive system of drainage canals. This work was immediately undertaken, and by the following year its effects began to show in the lowering of the water table in lands adjacent to the first drains. With the extension of the ditches, greater areas were affected, and in the course of a few years this hindrance to agricultural development was gradually removed.

In the period of the World War, high prices were paid for cotton, and especially for the longer staples, so that a rapid expansion of production occurred in the Salt River Valley and in the Yuma Valley in Arizona, and in the Imperial Valley in California. Interest in the crop in the Mesilla Valley received a stimulus, although no immediate commercial plantings were made. In 1916 the New Mexico Experiment Station resumed its experimental work for determining the variety best suited to local conditions.[4] Several varieties gave very satisfactory results in these trials, yielding from a bale to nearly a bale and a half to the acre. Similar tests were continued in 1917 and 1918 with equally good results, and it was clearly indicated that cotton could be successfully produced. However, it was not until 1919 that the first commercial planting was made. In that year a field of 30 acres was planted in the La Mesa district, and 15 bales of cotton were produced. As there were no gins in the valley at that time, it was necessary to ship this cotton about 45 miles to Fabens, Tex., for ginning. In 1920 the cotton plantings in the Mesilla Valley increased to 5,000 acres,[5] and approximately 2,700 bales were harvested. In that year, also, the first cotton gin in the valley was built at Las Cruces. Prices then declined, and plantings were reduced in 1921 to about 500 acres but rose again in 1922 as prices recovered. Since 1922 the cotton acreage has steadily increased, except for 1926, until in 1931 plantings totaled nearly 47,000 acres.

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[3] BLOUNT, A. E. EXPERIMENT WITH FIELD CROPS AT NEW MEXICO STATION. N.Mex. Agr. Expt. Sta. Bull. 6, 19 pp. 1892.

[4] STEWART, R. L. COTTON GROWING. N.Mex. Agr. Expt. Sta. Bull. 120, 16 pp., illus. 1919.

BEGINNINGS OF THE ONE-VARIETY MOVEMENT

During 1920 the principal varieties were Mebane, Lone Star, and Durango, with probably the largest acreage devoted to the latter variety. An attempt was made to unite on the Durango variety, but little progress was made. In February of that year a meeting of the farmers interested in growing cotton was called by the county farm bureau. This meeting, which was probably the first organized movement concerned with cotton growing to be held in the valley, drew a large attendance, and a temporary organization of the growers was effected. The interests and purposes of this organization, however, lay in the matters of securing labor for picking the cotton crop and for providing ginning facilities, rather than in varieties or seed stocks.

In December of the same year a series of meetings was conducted by the county agent in the various districts or farm bureau locals in the valley, which resulted in a general meeting being called for the purpose of forming a permanent organization of the cotton growers. This meeting, held in the latter part of the month, was attended by some 30 representative farmers. A constitution and bylaws were adopted and an organization formed known as the Mesilla Valley Cotton Growers' Association. At this meeting, a representative was selected to go to California to buy a carload of cottonseed for the use of association members. This seed, purchased in the Palo Verde Valley, consisted of 40,000 pounds of the Durango variety and 15,000 pounds of the Mebane variety.

Most of the cotton grown in the valley in the 1921 season was of the Durango variety, which at that time was grown extensively in California and was the principal variety in the Pecos River Valley in the eastern part of New Mexico, the only other cotton-producing district in the State. Satisfactory crops were obtained by most of the farmers, and in some cases exceptional yields resulted. It appeared, however, that the Acala variety might be somewhat better adapted to the local conditions than the Durango. Thorough trials of this variety in comparison with Durango and other varieties were recommended. The Acala variety had already been included in tests at the New Mexico Agricultural Experiment Station in 1921 and had given substantially higher yields than any of the other varieties.[6]

In the season of 1922, through the cooperation of farmers with the agricultural college and the county agent, several variety tests were carried on in different parts of the valley. In most of these tests, as well as in those at the college experiment station, the Acala variety gave the most satisfactory results. In the spring the Mesilla Valley Cotton Growers' Association had secured a carload of Acala seed from the Coachella Valley in California. This seed was placed with several farmers and produced exceptionally good crops, which stimulated interest in the variety and in the community-production idea. In the harvest season a meeting of the farmers in the Anthony and Berino districts, in the lower part of the valley, was held with a view to organizing an "all-Acala-cotton" planting campaign for the following year. At this meeting many farmers signified their interest in such a program.

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[5] Acreages given are based on figures compiled by R. F. Hare and F. E. Finley, Division of Crop and Livestock Estimates, Bureau of Agricultural Economics, U.S. Department of Agriculture, August 1929.

[6] OVERPECK, J. C., and CONWAY, W. T. COTTON. N.Mex. Agr. Expt. Sta. Bull. 141, 17 pp., illus. 1924.

In January 1923 the Mesilla Valley Cotton Growers' Association officially adopted the Acala variety for planting by association members. The college was requested to locate a supply of good Acala seed to be used as a nucleus for the development of future seed stocks for the community. Through the United States Department of Agriculture, sufficient purebred seed for the planting of 10 acres was obtained from the Acala breeding blocks of the Bureau of Plant Industry at the United States Experiment Date Garden at Indio, Calif. This seed was planted under the supervision of the State Experiment Station in isolated fields in the vicinity of the college. Arrangements were made for the cooperation of representatives of the United States Department of Agriculture who visited the valley during the course of the growing season to observe the development of the crop, rogue the seed-increase fields, and make plant selections to be used as the basis of future breeding operations.

The cotton acreage in 1923 in Dona Ana County increased from 2,500 to about 13,000 acres. Most of this acreage was included in the Mesilla Valley and was largely of the Acala variety. In the fall of the year the county farm bureau secured the services of a Government-licensed cotton classer, who determined the grade and staple length of the cotton for farmers who desired this service. As a result, it was subsequently reported that substantial premiums had been secured for the valley cotton.

PROGRESS OF ONE-VARIETY DEVELOPMENT

In the spring of 1924, a group of farmers in the district of La Mesa and Chamberino, most of whom had been members of the Mesilla Valley Cotton Growers' Association, formed a new organization and adopted the name Mesilla Valley Acala Cotton Growers' Association. This was the first organization in the valley whose primary purpose was the exclusive planting of one variety of cotton.

Under an arrangement with the agricultural college, designated members of this association received a part of the pure-seed increase grown under isolated conditions in 1923. At the same time the association arranged for the purchase and distribution of a carload of Acala seed from the Coachella Valley, seed from this shipment being used to plant the fields surrounding the pure-seed fields. During the summer, assistance in roguing the increase fields was given by cotton breeders of the United States Department of Agriculture, in cooperation with State Experiment Station and extension service workers. Also a new shipment of improved Acala seed was sent from the Government breeding blocks at Indio to the State Experiment Station and planted in an isolated field near the college, to be used the following year for the planting of seed-increase fields.

Twenty-six thousand acres of cotton were grown in Dona Ana County in 1924, a substantial part of this acreage being of the Acala variety. Prices were very favorable, and as a result much interest in cotton growing was aroused.

In November the Mesilla Valley Acala Cotton Growers' Association enlarged its membership and effected a more substantial organization, adopting rules and bylaws patterned after those of the very successful one-variety organization in the Coachella Valley, Calif. A formal agreement was entered into with the agricultural college, whereby the college agreed, through its cooperation with the United States Department of Agriculture, to furnish the association with limited supplies of purebred Acala seed for a period of 5 years at a stipulated price per pound. On its part the association undertook to make contracts with two or more of its qualified members to grow the pure seed under proper conditions of isolation and to observe such additional precautions as might be desirable. Under the terms of these individual contracts the growers agreed to supervise, in company with representatives of the State Experiment Station, the thorough cleaning of all gin machinery and apparatus prior to the ginning of the seed cotton from the pure-seed fields. One of the primary objects of the association was to secure the services of gins that would agree to handle only Acala cotton, and it was made contingent that before the purebred seed was to be released by the college, a sufficiently large acreage should be included in the association to insure the profitable operation of gins under such conditions.

The form of agreement between the college and the association, together with the association bylaws and the form of agreement between the association and its members, regarding the precautions for maintaining the supplies of pure seed, were as follows:

FORM OF AGREEMENT BETWEEN NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANIC ARTS AND MESILLA VALLEY ACALA COTTON GROWERS' ASSOCIATION AND ITS MEMBERS

THIS AGREEMENT, made as of this ______ day of ____________________ A.D., 19____, between the New Mexico College of Agriculture and Mechanic Arts and the Mesilla Valley Acala Cotton Growers' Association, a corporation duly organized and existing under the laws of the State of New Mexico, having its office and principal place of business at ________________________, County of Dona Ana, State of New Mexico, hereinafter called the Association; and sundry firms, partnerships, and persons, whose corporate or individual signatures and seals are hereto attached, hereinafter referred to as Growers,

WITNESSETH:

That it is the desire of all parties hereto to standardize the Mesilla Valley on one variety of cotton and to produce an adequate supply of pure seed for planting in the Valley and elsewhere.

NOW THEREFORE, and in consideration of the mutual covenants and agreements hereinafter contained and to be performed by the various parties hereto, and for and in consideration of the benefits to be derived by each and all of the parties hereto, it is mutually covenanted and agreed as follows, to wit:

The New Mexico College of Agriculture in cooperation with the United States Department of Agriculture agrees to supply the Association annually, for a term of five years, with Extra Grade Rogued Acala cottonseed to the capacity of its production of such seed at price not to exceed ______ cents per pound above oil mill prices for cottonseed.

The Mesilla Valley Cotton Growers' Association shall consist of such local organizations as can meet the requirements of the General Association.

In consideration of securing this seed each local Association agrees to contract with two or more of its members to plant this seed and increase it under conditions hereinafter set forth for general distribution among its members.

The immediate objective of the Association will be to secure the services of gins that will handle exclusively one variety of cotton. Before the Extra Grade Rogued Acala seed is released by the College to the Association for increase planting, a sufficient acreage shall be signed up in the Association to insure the profitable operation of one or more gins, which will handle exclusively the one variety.

That for the term of 5 years from and after the date hereof, the said Association is hereby appointed, made, and constituted the agent of the several Growers, with full power and authority to execute and carry out all the terms of this agreement, and said Association is hereby given and granted the exclusive rights to market, sell, and dispose of all the cotton seed grown or handled by the several Growers, in pursuance of and in compliance with the terms of this agreement.

For the purpose of protecting the pure seed stocks that are being increased and for convenience in marketing any seed to be sold, it is understood and agreed between all the parties hereto, that all of the cotton seed grown or handled by said growers and handled and marketed by said Association, shall be classed in accordance with the following rules which shall be and are hereby established, to wit:

Class 1 shall be known and designated as Extra Grade Rogued Acala cottonseed, and shall consist of seed bred, grown, and distributed to the Association by the New Mexico College of Agriculture and Mechanic Arts, thence to the members contracted with by the Association.

Class 2 shall be known and designated as Certified Pure Acala cottonseed and shall consist of the seed crop grown from Class 1 seed by the elected members and sold to the members of the Association at oil-mill prices plus extra cost of handling.

Class 3 shall consist of the seed reproduced from Class 2 and shall be known as No. 1 Commercial Acala cottonseed, which shall be for general distribution throughout the Valley and elsewhere.

Under no conditions shall the local Association sell Class 2 seed outside of the community in which it was grown unless it is definitely shown that there exists a surplus of this seed which cannot be utilized by members of the local Association. Class 3, or the commercial seed, shall be sold to any farmer in the Mesilla Valley whether an Association member or not, at oil mill prices plus the extra cost of handling. Seed from Class 3 may be sold outside of the Valley at a price to be set by the Association.

The Association shall sell all seed grown by its members, which is not eligible for classification as No. 1 Commercial Acala cottonseed, to the oil mill for oil mill purposes.

The Association member or members elected to increase the Extra Grade Rogued Acala cottonseed agrees to plant it in a field separated from other varieties of cotton by a distance of not less than one half of a mile; said Grower also agrees to exercise every possible precaution to prevent the mixture of this seed or seed cotton with other varieties, and to make a careful inspection of all picking bags and wagons used in handling this cotton from the seed-increase fields in order that no other seed cotton is mixed with the special stock; to reduce the danger of loss or injury from bad weather, select seed should not be left in the field until the end of the season but should be picked with reasonable promptness after the bolls open.

The Grower of the Extra Grade Rogued Acala seed, aided by a representative from the College, agrees to supervise the thorough cleaning of all gin apparatus including pneumatic pipes, overhead cleaner or beater, gin stand conveyer belt and the gin stands, and the sterilizer.

The seed from the selected stock shall be sacked in bags that are known to be free from any other cottonseed and be properly sealed and labeled, stored and handled by responsible representatives of the Association, and every precaution taken to avoid danger of mixture with other stored seed, weather damage, fire, or other accident.

The Grower contracted with shall release the increase from the Extra Grade Rogued Acala seed to members of the Association for general planting under rules and regulations stipulated in his contract with the Association and such contract shall provide that under no conditions shall this class of seed be sold outside of the community in which it was grown, unless it is definitely shown that there exists a surplus of this seed which cannot be utilized by members of the local Association.

Every grower in the Association agrees to grow only the one variety of cotton adopted by the Association and to plant only the class 2 or class 3 seed as it is increased and made available.

In Witness Whereof, the New Mexico College of Agriculture and Mechanic Arts and the Mesilla Valley Acala Cotton Growers' Association have caused their seals to be affixed by their authorized officers, and each of the said persons has hereunto affixed his individual name and seal, as of the day and year first hereinabove written.

NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANIC ARTS,

By --
(Its President)

MESILLA VALLEY ACALA COTTON GROWERS' ASSOCIATION,

By --
(Its President)

By --
(Its Secretary)

(Grower)

BY-LAWS OF MESILLA VALLEY ACALA COTTON GROWERS' ASSOCIATION

ARTICLE 1.—NAME

Section 1.—This association shall be known as the Mesilla Valley Acala Cotton Growers' Association. Its principal office shall be located in the Town of ———, County of Dona Ana, State of New Mexico.

ARTICLE 2.—OBJECT

The object of this Association shall be to standardize the Mesilla Valley on one variety of cotton, to produce an adequate supply of pure seed for planting in the valley and elsewhere, to cooperate with the New Mexico College of Agriculture and Mechanic Arts in the production of the seed, and to act as agent of the several growers in marketing, selling, or disposing of such seed in a way that will be most beneficial to the farmers of the Valley.

ARTICLE 3.—MEMBERSHIP

Section 1.—Any bona fide grower of farm products in the County of Dona Ana, of good character, may become a member of the Association by agreeing to comply with the requirements of the by-laws and signing the agreement hereunto attached.

Section 2.—A violation of these by-laws or any that may hereafter be adopted, or of any contract entered into by the Association with a member, shall constitute a sufficient cause for the expulsion or suspension of such members from the Association. Whenever the Board of Directors after a hearing determines that a member has ceased to be a bona fide producer of Acala cotton his membership may be terminated.

ARTICLE 4.—FISCAL YEAR MEETING

Section 1.—The fiscal year of the Association shall commence July 1 and end on the 30th of the following June.

Section 2.—The annual meeting of the Association shall be held in ------------ in the Town of --------------------, on the second Monday in July of each year at 10 o'clock A.M.

Section 3.—Special meetings may be called at any time by the president.

Section 4.—Notice of the annual meeting shall be mailed by the secretary to each member at least one week previous to the date of the meeting, and such notice shall be published in the local newspaper not less than one week previous to the date of meeting. At least five days before the date of any special meeting the secretary shall mail notice of each meeting to each member, which shall state the nature of the business to be transacted at such meeting.

ARTICLE 5.—QUORUM

Section 1.—One fifth of the members in good standing shall constitute a quorum for the transaction of business at any meeting.

ARTICLE 6.—DIRECTORS AND OFFICERS

Section 1.—The Board of Directors of this Association shall consist of five members who shall be divided into three classes. After the adoption of these bylaws the members shall elect from among themselves, one director of the first class for a term of one year; two directors of the second class for a term of two years; and two directors of the third class for a term of three years. At the expiration of the terms of the directors so elected, their successors shall be elected in like manner for terms of three years. Directors shall hold office until their successors have been elected and qualified and have entered upon the discharge of their duties.

Section 2.—The Board of Directors shall meet within 10 days after the first election, and after each annual election, and shall elect by ballot a president and a vice president from among themselves, and a secretary-treasurer who may or may not be a member of the Association. They shall also choose one auditor from the members who is not a director, officer, agent, or employee of the Association. Such auditor shall hold office for one year, or until his successor is duly elected and qualified.

Section 3.—Any vacancy in the Board of Directors shall be filled for the unexpired term by the remaining members of the Board of Directors, and directors so chosen shall hold office until their successors shall have been elected at a regular or called meeting of the Association.

Section 4.—Three members of the Board of Directors shall constitute a quorum at any meeting of the Board of Directors.

Section 5.—Any director or officer of the Association may for cause at any annual or any special meeting called for the purpose, at which a majority of the members shall be present, be removed from office by a vote of not less than two thirds of the members present.

ARTICLE 7.—DUTIES OF DIRECTORS

Section 1.—The Board of Directors shall manage the business and conduct the affairs of the Association and shall make the necessary rules and regulations, not inconsistent with law or with these bylaws, for the management of the business and the guidance of the officers, employees, and agents of the Association.

Section 2.—The Board of Directors may employ a business manager when the details of the business become too large to be handled by the secretary-treasurer, fix his compensation, and dismiss him for cause.

Section 3.—The Board of Directors may require the secretary-treasurer and all other officers, agents, and employees charged by the Association with responsibility for the custody of any of its funds or property to give bond with sufficient surety for the faithful performance of their official duties, which bond shall be paid for by the Association.

Section 4.—The Board of Directors shall meet on the ———, at such places as they may designate from time to time. Special meetings of the board shall be held on the call of the president or upon written request of two members of the board.

ARTICLE 8.—DUTIES OF OFFICERS

Section 1.—The president shall:

a. Preside over all meetings of the Association and of the Board of Directors.

b. Sign as president (with the secretary-treasurer) all checks, notes, deeds, and other instruments on behalf of the Association.

c. Call special meetings of the Association and of the Board of Directors, and perform all acts and duties usually required of an executive and presiding officer.

Section 2.—In the absence or disability of the president, the vice president shall preside and perform the duties of the president.

Section 3.—The secretary-treasurer shall:

a. Keep a complete record of all meetings of the Association and of the Board of Directors.

b. Sign as secretary-treasurer, with the president, all checks, notes, deeds, and other instruments on behalf of the Association.

c. Serve all notices required by law and by these bylaws.

d. Receive and disburse all funds and be the custodian of all the property of this Association.

e. Keep a complete record of all business of the Association and make a full report of all matters and business pertaining to his office to the members of the Association at the annual meeting and make all reports required by law.

f. Perform such other duties as may be required of him by the Association or the Board of Directors.

ARTICLE 9.—GRADING AND INSPECTING

Section 1.—All cottonseed grown by members for sale through the Association shall be subject to such inspection as may be established by the Board of Directors.

ARTICLE 10.—CONTRACTS AND AGREEMENTS

ARTICLE 11.—DUTIES AND RIGHTS OF MEMBERS

Section 1.—Each member of the Association shall have only one vote. Voting by proxy shall not be permitted.

ARTICLE 12.—EXPENSES AND PAYMENTS

Section 1.—The expense of operating the Association shall be met by a percentage charge laid upon returns for products sold.

Section 2.—The Association may pool or mingle the products of each member with products of like quality and grade delivered by other members. The net returns from the sale of such products less such costs and charges as are provided for in these bylaws and the rules prescribed by the Board of Directors shall be credited and paid to each member in proportion to the quantity of such products sold by him through the Association and on the basis of the average price received for such products of like quality and grade during such period or periods as the Board of Directors from time to time may determine.

ARTICLE 13.—ACCOUNTS AND AUDITING

Section 1.—This Association shall install a standard system of accounts and provide other accounting appurtenances that may be necessary to conduct the business in a safe and orderly manner.

Section 2.—The books and business of the Association shall be audited annually by the auditors selected from the membership or by a competent accountant, previous to the date of each annual meeting, at which meeting the report shall be presented in full. Special audits shall be made upon order of the Board of Directors or upon a majority vote of the members at any regular or called meeting.

ARTICLE 14.—LOCALS

Section 1.—Local Associations may be established by the Board of Directors to include a convenient seed district as Extra Grade Acala cottonseed becomes available to supply such locals.

Section 2.—Membership of the local Association shall include such members of the Mesilla Valley Acala Cotton Growers' Association as live within the district designated by the Board of Directors.

Section 3.—The officers of the local Association shall consist of a president, vice president, and secretary-treasurer to be elected at the annual meeting of the local Association to be held at some convenient place designated by the president.

Section 4.—The directors of the Mesilla Valley Acala Cotton Growers' Association, if they consider it expedient, can authorize the officers of the local Association to assume the responsibility of apportioning the Class 2 Acala cottonseed to its own members.

ARTICLE 15.—AMENDMENTS

These bylaws may be amended at any meeting by a two thirds vote in the affirmative of the members present, provided the notice of the proposed amendment is included in the call for said meeting.

We, the undersigned charter members, agree to abide by these bylaws and the agreement to which they are attached.

FORM OF AGREEMENT BETWEEN THE ASSOCIATION AND ITS MEMBERS

THIS AGREEMENT, made and entered into this ______ day of ___________, A.D. 19____, by and between the Mesilla Valley Acala Cotton Growers' Association, hereafter called the party of the first part, and __________________________ hereafter called the party of the second part;

WITNESSETH, that in consideration of the mutual covenants herein contained it is hereby agreed by and between the parties hereto as follows, to wit:

I

The said party of the first part shall and will furnish an order on State College, New Mexico, to the said party of the second part, for ____ pounds of seed which the party of the second part shall purchase at ________ a pound, and grow for the Association under the terms set forth in this agreement, and in accordance with the agreement between the Mesilla Valley Acala Cotton Growers' Association and the New Mexico College of Agriculture and Mechanic Arts, which is attached to and becomes a part of this agreement.

II

The party of the second part shall and will furnish the land of suitable character for planting said cotton seed to be furnished by the party of the first part to the party of the second part, and prepare said land for planting, and plant said cotton seed in a saving, careful manner; irrigate said lands, cultivate and gather said crop in a careful manner; gin the same in a good and workmanlike manner; and store and insure all seed which is suitable for planting, in accordance with the rules and regulations of the party of the first part.

The party of the second part shall sell said seed only to persons holding orders from the secretary of the Association for definite amounts, and under the terms set forth in the bylaws of the Association, and the agreement between said Association and the New Mexico College of Agriculture and Mechanic Arts.

Immature or frost injured seed shall not be sold for planting purposes.

Should the party of the first part fail by the ________________________, to provide orders for the sale of said seed, or to reimburse the party of the second part for said seed, the party of the second part may within ten days after notifying the president of said Association of his intentions to do so, sell any amount of seed remaining to such parties as he may see fit. The party of the first part shall have full authority to sack, clean, seal, store, and insure said seed as it may see fit. No undeveloped seed or seed fit only for oil mill or feed purposes shall be sold or used for seed purposes.

____
(President)

____
(Secretary)

____
(Grower)

____
(Witness)

Summarizing the terms of this agreement, three classes of seed were recognized: Class 1, consisting of seed distributed by the college to association members and known as extra grade rogued Acala seed; class 2, consisting of the seed grown from class 1 seed by designated association members and known as certified pure Acala seed; and class 3, consisting of seed grown from class 2 seed, and known as no. 1 commercial Acala seed. The sale of class 2 seed, which was intended primarily for the use of association members, was to be handled by the association, and no seed of that class was to be sold outside the community unless a surplus existed, or the association failed by a stipulated date to sell the seed, in which case the member might dispose of it as he saw fit after having given notice of his intention. Class 2 seed was to be sold to association members at the oil-mill price, plus the extra costs of handling. Seed of class 3 was made available to any farmer in the Mesilla Valley, whether a member of the association or not, at prices the same as for class 2 seed. Such seed might also be sold outside the valley at prices fixed by the association. All seed grown by association members which was not eligible to any of these classes was to be sold for oil-mill purposes only.

At this period in the development of cotton production in the Mesilla Valley, the desirability of local facilities for the breeding of seed stocks became evident. Differences between the climatic conditions of the Mesilla Valley, or of New Mexico in general, and the districts from which stocks of seed had been obtained indicated the possibility that specially bred local strains might grow to better advantage than those from districts having widely different climatic conditions. Past experience had shown that stocks of seed of apparently stable character frequently exhibited great diversity when grown under new conditions, thus suggesting the need of breeding and acclimatization work being done under the local conditions. Officers of the New Mexico College of Agriculture and Mechanic Arts and of the United States Department of Agriculture gave attention to the matter, and a tract of land forming a part of the college property was tentatively set aside for such purposes. In April 1925 an agreement was entered into by the college and the Department for the establishment of a cooperative field station for the breeding of cotton, the study of allied problems, and general acclimatization work. During the spring months 2½ acres of the tract (fig. 1) were leveled and planted with seed brought from the Acala breeding blocks of the United States Experiment Date Garden at Indio, Calif.

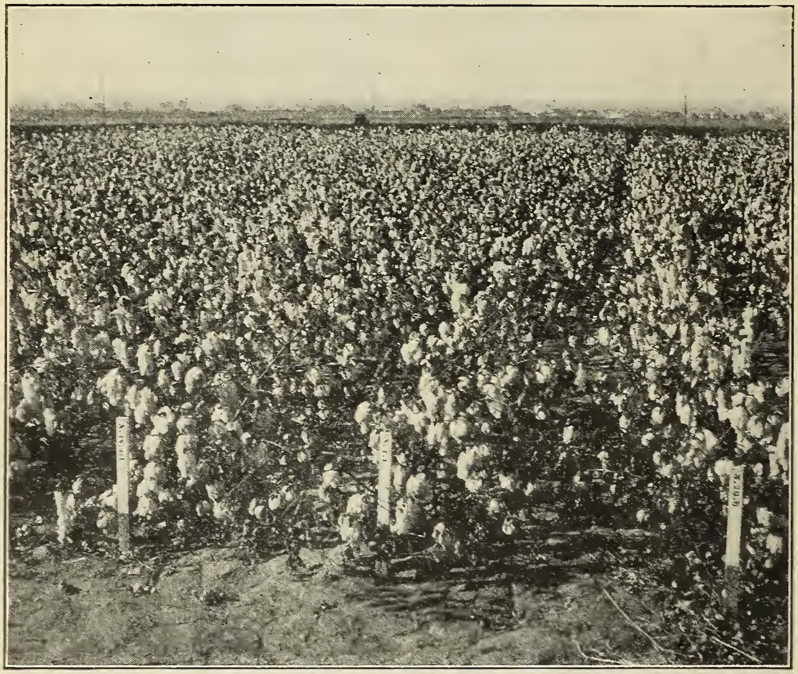

FIGURE 1.—Acala cotton breeding plot, United States Acclimatization Field Station, State College, N.Mex.

Under the terms of the agreement between the association and the college, approximately 6,000 pounds of Acala seed, which had been grown in the isolated fields near the college, were delivered to the association in the spring of 1925 and placed with association members for increase. The seed grown by association members in 1924 was distributed as far as possible in the community in which it was grown, considerably augmenting the acreage of "well-bred" seed. In addition, another carload of Coachella Valley Acala seed was again purchased through agreement of a number of farmers. Beside these plantings, there was a large acreage of older Acala seed that had been grown in the valley for 2 or 3 years. Altogether, in 1925, some 40,000 acres were planted to cotton in the Mesilla Valley and a very substantial share of this acreage was of the Acala variety. The average production of lint per acre was estimated at 373 pounds.

In cooperation with the county agent and college workers, roguing demonstrations to remove off-type or undesirable plants were given in some of the seed-increase fields and attended by numbers of farmers (fig. 2). The desirable true type of Acala plants was pointed out and also examples of off-type "rogue" plants, which appear to a limited extent, even in carefully bred strains of cotton. By these field demonstrations, the necessity for roguing and inspection of fields from which the seed was to be used for planting purposes was made apparent to the farmers and their attention directed to the advantages of one-variety production, whereby the danger of cross-pollination of different varieties in the fields is entirely prevented.

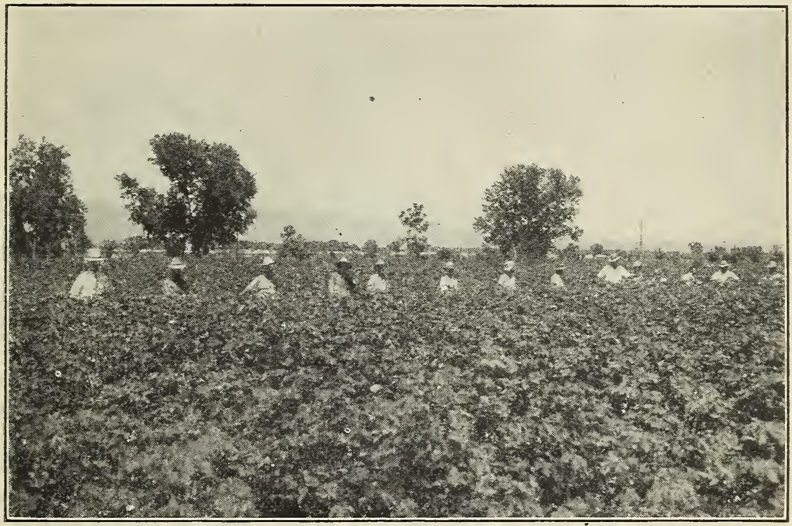

FIGURE 2.—A group of farmers roguing a pure seed increase field in the Mesilla Valley, N.Mex.

In the fall of the year owners of a gin at Vado, which is convenient to the seed-increase fields in the La Mesa district, constructed a separate house for storage of the seed cotton. Certain days were set aside for ginning of the pure cotton, prior to which the ginning machinery was carefully cleaned of all seed from previous operations. This was the first of such storage houses to be built, but similar equipment was soon provided at other gins in the valley.

The successful operation of the Acala cotton community in the La Mesa and Chamberino districts, and the increased returns which its farmers were receiving had aroused general interest among valley farmers and a desire for the improved seed became widespread. During the winter of 1925–26 members of the Picacho Farm Bureau local organized their community into a one-variety district. This district lies west of the Rio Grande, in the upper part of the valley, and is well adapted to seed-improvement work, being somewhat isolated from other cotton-producing districts. The organization was effected as a subsidiary of the older association in the La Mesa and Chamberino districts, and most of the farmers joined the movement.

In 1926 a sufficiently large acreage of cotton was being planted in the La Mesa and Chamberino communities to warrant the construction of a gin. These districts, being the center of the Acala pure-seed work, had practically their entire acreage planted to that variety. It therefore appeared feasible to operate a gin on a strictly one-variety basis. During the summer of 1926 a site was secured in the central part of the district and a modern ginning establishment was constructed, with adequate facilities for the storage of seed cotton from the increase fields and for the seed after ginning (fig. 3). Since its construction this gin has been successfully operated on a one-variety basis. Some outside capital was interested in the project, but the major portion of the funds was provided by members of the Mesilla Valley Acala Cotton Growers' Association, who thereby acquired a controlling interest in the gin and could direct the policy of its operation.

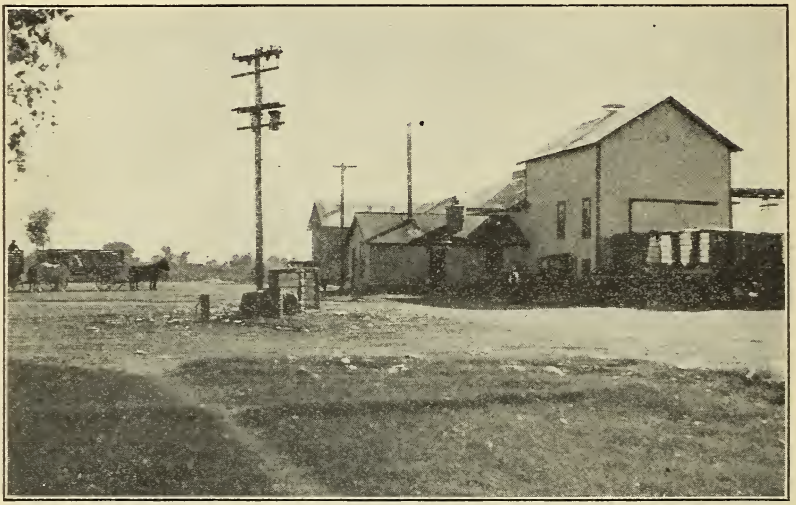

FIGURE 3.—Cotton gin in the Mesilla Valley, N.Mex., owned and operated by the farmers of the community and ginning only the Acala variety.

PRODUCTION OF PLANTING SEED

In 1928 the Mesilla Valley Acala Cotton Growers' Association allied itself with the New Mexico Crop Improvement Association, adopting the regulations of that association regarding the classification and handling of seed. Under the rules of the crop improvement association, three grades of seed are recognized. The first or Elite grade is the seed grown at the acclimatization field station or college experiment farm and delivered to seed association members. It corresponds to the Extra Grade Rogued seed referred to in the joint contract between the college and the Acala Cotton Growers' Association. The second grade is known as "registered" seed. It corresponds to the certified pure seed of the contract, and is grown from the Elite seed by association members and rogued by the field station and college workers. The third grade is known as "certified" seed and corresponds to the no. 1 commercial seed referred to in the contract. It is grown from the registered seed. The fields in which the seed is grown must meet the standards of purity and uniformity set by the crop improvement association.

The cycle in the seed production program has its beginning in the experimental plots of the acclimatization field station. Small new increments of seed from the breeding blocks at Indio, Calif., are received yearly for the planting of these plots as a basis of increase and for comparison with the seed stocks that have been grown at the station for a year or more. Breeding and selection operations are also carried on at the station with the purpose of producing superior strains or improved local adaptations. The plants in the field station plots are carefully rogued during the growing season and also are the object of more or less constant inspection in the course of day-to-day routine field work.

Seed from these plots is planted the following year in the fields at the agricultural college experiment farm. If more seed is available than is required for such plantings, some of it may be delivered to designated members of the growers' association. The experiment-farm fields are carefully rogued at least twice during the summer. The product of these fields, together with any surplus from the field station, constitutes the Elite grade of seed which is furnished to seed association members and to cooperative associations in the other cotton-growing districts of New Mexico.

Association members assist in the roguing of the increase fields, and numbers of farmers have become proficient in detecting undesirable types of plants. The seed cotton grown from Elite seed is picked as promptly as possible, in order to prevent weather damage, and held in storage at the gins until a sufficient supply is on hand to warrant the cleaning of the gin machinery. After ginning, the seed is immediately sacked, sealed, and labeled with the crop-improvement association certificate as the registered grade, which is sold only to association members, unless a surplus exists above local requirements. The following year seed grown in the fields planted with the registered grade of seed is admissible to the certified grade, provided the fields have been inspected and are found to be up to the required standard of uniformity. Seed of this grade is intended for general sale throughout the valley, or in outside districts if a sufficient supply exists. Prices for the registered and certified grades within the valley are restricted to local oil-mill prices, plus a reasonable charge to cover the extra costs of handling. If the certified grade is sold outside the valley, prices are fixed by the association. Any seed not eligible to the certified grade must be sold to the oil mill.

By this system there is a regular movement of improved seed from its source in the breeding blocks at the acclimatization field station, through the increase fields at the college experiment farm to fields of association members and then to general distribution. For the past several years upwards of 200 acres have been planted each year by association members with seed received from the college experiment farm or the field station. Seed from these fields that is admitted to registration has provided the means of planting over 4,000 acres yearly, which, in turn, provides sufficient seed for the entire valley, with an excess for outside sale.

RESULTS OF SEED-IMPROVEMENT WORK

Since 1926 the system by which the quality of the seed stocks and the lint cotton are maintained and improved has been operating with increasing effectiveness and success. There has been a marked improvement in the uniformity and length of the lint produced, and at the same time yields have continued to be high. At the inception of the seed-improvement work, off-type and rogue plants were by no means infrequently found, even in the seed-increase fields. The gradual eradication of such off types and the increased uniformity of the plants have been apparent to all concerned in the annual field inspections and roguing operations. During the most recent of the field inspections, in 1931, it was estimated that there was less than 0.1 percent of off-type plants in the fields planted with seed from the college experiment farm and the field-station plots.

Under the existing arrangements for production and distribution, it is estimated that over 90 percent of the farmers in the Mesilla Valley are planting improved Acala seed, emanating originally from the acclimatization field station and the college experiment farm. During the past several years new varieties, backed by strong claims for superior qualities, have been introduced into the valley by seed sellers and have enjoyed brief periods of popularity among a few farmers. None of these new and "superior" kinds has survived more than a season or two, since they have not been shown to be the equal of the Acala variety under the local conditions. In spite of such incursions, and to some extent on account of them, larger acreages have been planted each year with seed produced by members of the Acala growers' association, as farmers throughout the valley have realized its desirable qualities from a production standpoint. In addition, such seed may be had at a much lower cost than the highly advertised and expensive novelties brought in from outside sources.

It is not possible to measure in money value all of the increased returns to the farmers that have resulted from community production and seed-improvement work in the Mesilla Valley, but during most seasons substantial premiums above the market price for shorter fiber have been received by the growers.

ONE-VARIETY COTTON PRODUCTION IN OTHER SECTIONS OF NEW MEXICO

There are several other cotton-growing districts in New Mexico which have undertaken one-variety production. The principal ones are in Chaves and Eddy Counties, which lie in the southeastern part of the State in the valley of the Pecos River. Portions of these counties form the oldest cotton-producing districts in the State, having grown commercial crops more or less regularly since 1910. In these districts the valley of the Pecos is a broad and fairly level plain, containing large areas of good agricultural land. Climatic conditions are much the same as in the Mesilla Valley. Farming is carried on under irrigation; in Chaves County the water supply being partly from artesian wells, augmented by pumping and by streams flowing into the valley from the Sacramento Mountains, while in Eddy County the irrigation water comes principally from the Pecos River. There are approximately 50,000 acres of irrigated land in Chaves County and about 46,000 acres in Eddy County.

Other districts are located in Otero, Luna, Hidalgo, and Valencia Counties.

EDDY COUNTY

The first commercial crops of cotton produced in New Mexico were grown in Eddy County, near the town of Carlsbad, about 1910. The crop proved to be well adapted and rapidly became of major importance. There was no steady increase in the amount of cotton planted, however, as the acreage fluctuated from year to year under the influence of the price obtained for the crop.

During the earlier years of cotton culture in Eddy County several varieties of short-staple upland cotton were introduced and grown with varying degrees of success. It was not until 1915, however, that any effort toward the production of an improved type was made. In that year, Francis G. Tracy, of Carlsbad, introduced the Durango variety into the community. This variety proved so well adapted to the local conditions and produced fiber of so much better quality that in the course of a few years, under the influence of favorable prices, the cotton acreage in Eddy County was rapidly increased. By 1919 over 9,000 acres were planted.

In September 1918 an organization of the growers known as the Eddy County Cotton Growers' Association was formed for the purpose of encouraging the planting of Durango cotton and marketing the crop. The improvement of seed stocks was also fostered through the cooperation of association members, the county extension agent, and representatives of the United States Department of Agriculture. Owing to the generally good results obtained with the Durango cotton, the county had by this time become identified with that variety and to a limited extent was a source of planting seed for other districts.

In 1920 the Acala variety was introduced into the county through the county extension agent and appeared to be somewhat better adapted to the local conditions than the Durango. Increasing acreages of Acala were planted and by 1926 it had become the principal variety grown in the county. In the spring of 1928 a number of farmers in the vicinity of Carlsbad, with the cooperation of the extension department of the agricultural college and the United States Department of Agriculture, organized the Eddy County Acala Cotton Growers' Association. The plan of organization and handling of seed stocks was in all essentials the same as that followed in the Mesilla Valley, and it was found to be equally successful. Each year the association receives from the college its allotted amount of pure-bred Acala seed. The increase fields are isolated and rogued carefully, separate ginning is provided, and the seed is made available to all association members at small cost. At the present time nearly the entire cotton acreage in Eddy County is devoted to the Acala variety.

CHAVES COUNTY

The history of cotton growing and community development in Chaves County was similar to that in Eddy County.

The first commercial plantings were in 1920, when about 1,200 acres of Durango cotton were grown. In 1921 the Durango Cotton

Growers' Association was organized, with headquarters at the town of Roswell.

During 1922 and 1923 small plantings of other varieties, such as Lightning Express, Mebane, Kasch, and Rowden, were made but failed to give results as satisfactory as the Durango. Four small experimental plantings of Acala were also made in 1923 in various parts of the county. These plantings gave such uniformly good results that considerable interest was aroused, and the replacement of the Durango by the Acala variety followed much the same course as in Eddy County. In 1924, 20,000 pounds of Acala seed was planted, half of this from the Mesilla Valley and half from a commercial seed breeder in Texas. In 1925 about 40,000 pounds of seed were planted, most of which came from Eddy County. In 1926 definite plans for one-variety production were undertaken by an organization of the farmers known as the Pecos Valley Acala Cotton Growers' Association, formed upon the same lines as the Mesilla Valley association. An agreement was entered into with the agricultural college for annual supplies of pure-bred seed, suitable arrangements were made for the growing, roguing, and handling of the seed stocks, and the association has continued in successful operation.

As in other districts, brief incursions of highly touted and high-priced seed have been experienced, but other varieties have not survived after it was demonstrated that they lacked the advantages of the Acala variety under the local conditions. As a general result of the work in Eddy and Chaves Counties the quality and uniformity of the cotton raised in the Pecos Valley has been much improved, and the cost of good planting seed was made low enough for universal use by all the cotton growers in the valley. The production of a single superior type of cotton undoubtedly has resulted in the production of more uniform fiber and in better prices to the growers than would otherwise have been obtained.

OTERO COUNTY

Otero County lies in the south-central part of New Mexico, adjoining Chaves and Eddy Counties on the east and Dona Ana County on the west. A large part of the county is occupied by the so-called "Tularosa Basin", a wide desert plain lying between the San Andres, White, and Sacramento Mountains. The mean elevation is about 4,000 feet. Cotton is grown in a small district centering about the town of Tularosa, lying at the eastern edge of the basin at the foot of the Sacramento Mountains, where small streams supply a limited amount of irrigation water. Favorable results were reported from small experimental plantings in 1920, and in 1924 about 300 acres were planted near the towns of Tularosa, La Luz, and Alamogordo. On the advice of the agricultural college extension service, plans were made for planting the Acala variety only, but seed was not obtained from a satisfactory source. Cultural difficulties also were encountered in general, but the fields that were properly cared for returned good yields.

In the absence of a local gin the seed cotton had to be shipped to El Paso, Tex., for ginning, but in spite of these obstacles satisfactory returns to the growers were realized.

Stimulated by the favorable outcome of the previous year and by the current high prices, interest in cotton growing increased in 1925, and an effort was made to reach an agreement among the growers to confine plantings to seed of one variety. The natural isolation of the district, 75 miles from the nearest cotton-producing area, afforded unusually favorable conditions for establishing a pure-seed producing center. The Acala variety was selected as the basis of the plan and arrangements made to secure seed from the Mesilla Valley to plant approximately 1,000 acres. With this acreage in view the growers were confronted with the necessity of obtaining ginning facilities. An offer was received from a commercial cottonseed grower in Texas for the erection of a gin, provided an agreement would be entered into by all the growers to plant only seed supplied by the dealer. After consideration, this offer was accepted as the only way to insure the construction of a gin in the community. The seed already on hand was exchanged for that supplied by the dealer at a substantial increase in price. About 900 acres were finally planted, from which 600 bales were produced, with very satisfactory financial returns.

The years 1926 and 1927 witnessed the production of good crops, and cotton assumed major importance in the district. In the spring of the latter year the growers entered into an agreement with the agricultural college and obtained a small supply of pure Acala seed as a nucleus for the district. The fields planted with this seed were subsequently rogued by representatives of the United States Department of Agriculture and the college extension service. The seed cotton was ginned separately after the careful cleaning of the gin machinery.

In 1928 the organization of the growers was completed under the name of the Tularosa Acala Cotton Growers' Association, and a contract was entered into with the agricultural college similar to those of the other community associations. Because of the low prices in recent years, the cotton acreage in the Tularosa district has been greatly reduced, though the farmers who continue to grow cotton are committed to the one-variety plan.

VALENCIA COUNTY

Cotton growing extended for a few years to the upper Rio Grande Valley in Valencia County, at an approximate elevation of 4,800 feet, but the crop proved rather precarious, and the farmers lost interest when prices declined. The first plantings were made in 1923 near the town of Belen and included a comparative test of three varieties, Durango, Acala, and Mebane, which was continued in the next year. To meet the requirements of the very short seasons, a special narrow-leaf selection of Acala, bred in California, was tested in 1925 and was found to open earlier and to give larger yields than other early varieties (Mebane, Half-and-Half, Lightning Express, and stocks of broad-leaf Acala) used for comparison. An exclusive cultivation of the narrow-leaf Acala was projected, and a seed stock brought from California. Satisfactory yields were obtained in 1926, but prices fell, and in 1927 were too low to encourage further planting.

LUNA COUNTY

Luna County lies in the southwestern part of the State and consists for the most part of a fairly level desert plain at an elevation of from 4,000 to 4,400 feet. Farming is practiced only under irrigation, with water pumped from wells.

Interest in cotton growing in Luna County, as in other localities, was first aroused by the high prices which prevailed just after the war period and was further stimulated by the success of the crop in the Mesilla Valley. Prior to 1920 a few small plots of cotton had been grown, with such favorable results that the county farm bureau advocated experimental test plantings in small acreages that year. Approximately 700 acres were planted, principally to the Mebane and Durango varieties, and fairly satisfactory yields were obtained.

From 1921 to 1924 the cotton acreage in Luna County fluctuated. Several varieties were planted and returns were sufficiently satisfactory to maintain interest in the crop. In January of 1925 the county extension agent was authorized by a group of farmers to secure 5,000 pounds of Acala seed from the Coachella Valley in California. The cotton from the fields planted with this seed was ginned separately and the seed saved for planting.

In the spring of 1926 the Mimbres Valley Acala Cotton Growers' Association, with headquarters at the town of Deming, was organized along the lines of the Mesilla Valley association. A supply of purebred Acala seed was obtained for increase in isolated fields, roguing was done during the growing season, and care was taken to avoid mixing at the gin. After 1926 the plan of the other one-variety districts in New Mexico was followed until cotton ceased to be of commercial importance due to low prices.

HIDALGO COUNTY

Hidalgo County lies in the southwestern corner of New Mexico, bordering Grant County on the east and the State of Arizona on the west. Cotton growing is restricted to a small area known as the Virden district, in the northern part of the county, along the valley of the Gila River, adjoining the Duncan district, an older cotton-growing area in Arizona.

The first commercial cotton plantings in the Virden district, about 400 acres, were made in 1924, but the acreage was insufficient for the profitable operation of a local gin plant. Due to a cotton quarantine in Arizona, on account of the existence of the pink bollworm in the Mesilla Valley, special permission had to be obtained before the crop of the Virden district could be ginned at Duncan.

In 1926 the larger part of the 550 acres of cotton in the district were planted with Acala seed purchased in California, and resulted in the production of a better quality cotton than had been grown during the two preceding years.

In the spring of 1927 the Virden Acala Cotton Growers' Association was formed, with headquarters in the town of Lordsburg, the county seat. The by-laws of this association and the cooperative agreement entered into with the State Agricultural College and the United States Department of Agriculture followed the same plan as that previously described. A small supply of pure Acala seed was furnished by the Department of Agriculture as a nucleus for future seed stocks, and this seed was placed by the association with two of its members. The balance of the seed in the district was largely of the Acala variety from the crop of the previous year. The fields of the association farmers were inspected, and the pure-seed fields were rogued. Yields for the season were the most satisfactory that had yet been obtained.

During 1928 and 1929 the operations of the seed association were continued, although a few of the farmers became dissatisfied and planted other varieties. In 1929 test plantings were made and figures on relative yields of several varieties obtained by the county agent, which indicated that the Acala variety outyielded the others. Since that year however cotton has ceased to be of commercial importance in the Virden district.

CONCLUSIONS

The establishment of one-variety communities by the farmers of several cotton-growing districts in New Mexico has afforded practical evidence of the value of this improved system of production. It has been demonstrated that by the adoption and maintenance of a good variety, which is well adapted to cultural conditions, commercial quantities of a uniform and high quality staple may be produced. Increased returns from the crop have been realized, and, although prices have been low during the past few years, the farmers know that they have obtained more for their cotton than would have been the case if mixed staple of several different varieties had been grown. Stocks of seed have been much improved and enlarged, while at the same time the cost of seed within the community has been kept low.

Though some of the districts, organized for one-variety cooperation, have stopped planting because they found cotton less profitable than other crops at recent prices, it is to be expected that cotton growing may be resumed with a better market outlook, since it is known that natural conditions are not unfavorable. The merits of the one-variety system and of the Acala variety in New Mexico are indicated by the fact that, in spite of the discouragements of cotton growing in the past few years, the community organizations in all of the districts which have continued to grow cotton have survived and functioned with increasing efficiency and have maintained that variety in production.

Experience of the one-variety communities in New Mexico affords further evidence that maintenance of supplies of good seed is one of the essentials of any program of improvement in the quality of the fiber and that improvements in cultural practices, which also are necessary to good quality and good yields, are developed to best advantage where all of the farmers grow the same kind of cotton, which makes them aware that their problems are the same. Marketing problems also may be handled more effectively where the interests of all the growers lie in the same direction, and a regular production of a uniform fiber through a period of years enables the communities to build up a reputation for their cotton.

LIST OF PUBLICATIONS ON COMMUNITY COTTON IMPROVEMENT

The following is a list of publications issued by the Department of Agriculture, and other papers on the improvement of the cotton industry by utilizing superior varieties and maintaining pure seed supplies through community organization. Prices have been indicated on publications available through the Government Printing Office. Orders for such should be sent with remittance (stamps not accepted) to the Superintendent of Documents, Government Printing Office, Washington, D.C. Other publications cited here may be consulted in libraries.

Cotton Selection on the Farm by the Characters of the Stalks, Leaves, and Bolls. O. F. Cook. 1910. U.S.Dept.Agr., Bur. Plant Indus. Circ. 66.

Cotton Improvement on a Community Basis. O. F. Cook. 1911. U.S. Dept. Agr. Yearbook, pp. 397–410. (See also Report of Chief of the Bur. Plant Indus. for 1911, p. 24.)

Selection of Cotton and Corn Seed on Southern Farms. S. A. Knapp and J. A. Evans. 1912. U.S.Dept.Agr., Bur. Plant Indus. Doc. 747. (Farmers' Cooperative Demonstration Work, A–67.)

Factors Affecting the Production of Long-Staple Cotton. O. F. Cook. 1913. U.S.Dept.Agr., Bur. Plant Indus. Circ. 123: 3–9.

Cotton Problems in Louisiana. O. F. Cook. 1913. U.S.Dept.Agr., Bur. Plant Indus. Circ. 130: 3–14.

The Relation of Cotton Buying to Cotton Growing. O. F. Cook. 1914. U.S. Dept. Agr. Bull. 60. Price 5 cents.

Custom Ginning as a Factor in Cotton-Seed Deterioration. D. A. Saunders and P. V. Cardon. 1915. U.S. Dept. Agr. Bull. 288. Price 5 cents.

Community Production of Durango Cotton in the Imperial Valley. Argyle McLachlan. 1915. U.S. Dept. Agr. Bull. 324.

Community Production of Egyptian Cotton in the United States. C. S. Scofield, T. H. Kearney, C. J. Brand, O. F. Cook, and W. T. Swingle. 1916. U.S. Dept. Agr. Bull. 332. Price 5 cents.

Tests of Pima Egyptian Cotton in the Salt River Valley, Arizona. T. H. Kearney. 1916. U.S.Dept.Agr., Alkali and Drought Resistant Plant Investigations Circ. 1.

Extension of Cotton Production in California. O. F. Cook. 1917. U.S. Dept. Agr. Bull. 533. Price 5 cents.

Production of American Egyptian Cotton. C. S. Scofield, T. H. Kearney, C. J. Brand, O. F. Cook, and W. T. Swingle. 1919. U.S. Dept. Agr. Bull. 742. Price 5 cents.

Cotton Improvement under Weevil Conditions. O. F. Cook. 1924. U.S. Dept. Agr. Farmers' Bull. 501 (revised). Price 5 cents.

Cotton a Community Crop. O. F. Cook. April 1920. Jour. Heredity 11: 174–177.

Commercial Parasitism in the Cotton Industry. O. F. Cook. July 1, 1920. Nature (London) 105: 548–549.

Community Cotton Improvement in North Carolina. R. Y. Winters, S. W. Hill, and P. H. Kime. 1920. N.C. Agr. Ext. Serv. Circ. 108.

Your Community's Cotton Reputation. How Some Communities Are Building Good Cotton Names and Capitalizing Them. F. H. Jeter. Jan. 29, 1921. The Progressive Farmer 36: 130.

The Cotton Variety Problem. J. S. Cates. Mar. 5, 1921. The Country Gentleman 86 (10): 9, 34.

Adelanto en el Cultivo del Algodón. O. F. Cook. March 1921. Boletín de la Unión Panamericana 52: 273–294.

City and Country. O. F. Cook. Mar. and Apr. 1921. Jour. Heredity 12: 110–116, 167–173.

Improvements in Cotton Production. O. F. Cook. 1921. U.S. Dept. Agr. Circ. 200. Price 5 cents.

Cottonseed Mixing Increased by Modern Gin Equipment. W. W. Ballard and C. B. Doyle. 1922. U.S. Dept. Agr. Circ. 205. Price 5 cents.

One-Variety Cotton Communities. O. F. Cook. 1922. U.S. Dept. Agr. Bull. 1111. Price 10 cents.

Unified Cotton Communities. O. F. Cook. Apr. 1924. Jour. Heredity 15 (4): 167–168.

Culture of Pima and Upland Cotton in Arizona. O. F. Cook and R. D. Martin. 1924. U.S. Dept. Agr. Farmers' Bull. 1432. Price 5 cents.

Community Cotton Production. O. F. Cook and R. D. Martin. 1924. U.S. Dept. Agr. Farmers' Bull. 1384. Price 5 cents.

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Improvements Made in Cotton Production in the United States. Aug. 12, 1925. U.S. Dept. Agr. Official Record.

Cotton Improvement Laws in California. O. F. Cook. Sept. 1925. Jour. Heredity 16 (9): 335–338.

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